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CONTRACT NO. N62472-94-D-0398	DELIVERY ORDER 0017 Mod. #3	ACTIVITY LOCATION Earle Colts Neck, NJ
PROJECT TITLE: SITES 22, 23 AND 27 REMEDIATION		
FROM: Foster Wheeler Environmental Corp. - Program QCM: Akram Aziz		DATE August 16, 1996
TO: NTR: D. Cooper (3 copies)		DATE AUGUST 16, 1996

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DATE

ITEM NO.	SUBMITTAL DESCRIPTION	PREPARED/ SUBMITTED BY	APPROVED	DISAPPROVED	REMARKS
6	SD-18, Records	A. Aziz			
	Draft Work Plan for Sites 22, 23 and 27				
	Remediation				

**WORK PLAN
FOR
SITES 22, 23 AND 27 REMEDIATION
NAVAL WEAPONS STATION EARLE
COLTS NECK, NEW JERSEY**

Issued:

August 16, 1996

Prepared for:

**NORTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
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**Contract No. N62472-94-D-0398
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Date

8/16/96

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Approved by:

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WORK PLAN FOR
 REMEDIAL ACTION CONTRACT N62472-94-D-0398-DO #0017
 NAVAL WEAPONS STATION EARLE- MODIFICATION NO. 3
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1.0 INTRODUCTION/PROJECT BASIS

Foster Wheeler Environmental Corporation (Foster Wheeler Environmental) has been contracted by the Northern Division Naval Facilities Engineering Command to provide remedial actions involving the removal and disposal of contaminated soils at the United States Naval Weapons Station Earle in Colts Neck, New Jersey. This Work Plan has been prepared to satisfy requirements of the Remedial Action Contract, Delivery Order No. 0017, Modification No. 3.

The purpose of this remedial action is to remove contaminated soil from Sites 22, 23 and 27 at the Naval Weapons Station Earle.

The proposed schedule of implementation will begin with the collection of waste characterization sampling. It is estimated that the excavation and backfilling operations will begin September 21, 1996.

This Work Plan presents the proposed implementation of the remediation project. Site description information is presented in Section 2.0. The implementation of on-site activities is provided in Section 3.0. Field sampling and analytical procedures and requirements are discussed in Section 4.0. Project management is presented in Section 5.0. Regulatory compliance is addressed in Section 6.0.

The Health and Safety Plan (HASP) is a companion plan to this Work Plan.

2.0 SITE DESCRIPTION

The Naval Weapons Station Earle is situated on 11,134 acres in Monmouth County in east-central New Jersey. Sites 22 and 23 are located in the north central portion of the facility, and Site 27 is located in the south central portion of the facility.

2.1 SITE 22

Site 22, located west of Building D-2, is an approximately 5,000 square foot area used as a sand blast and paint disposal area. Results from samples previously obtained in the disposal area did not reveal any concentrations above the NJDEP Residential or Non-Residential Direct Contact Cleanup Criteria concentrations. As recommended by the RI Report, the limited soil removal with disposal will be according to visual inspection of paint chips in the soil. The depth of the material is estimated to be one foot below grade. The site is accessible off of a macadam road from Midway Road.

2.2 SITE 23

Site 23, located along the western side of Building D-5, is a former paint disposal area used from the early 1970s until approximately 1993. The estimated dimensions of the Site 23 disposal area are 75 feet by 50 feet by 3 feet deep. Results from previous sampling indicated that polyaromatic hydrocarbons (benzo (a) anthracene, benzo (a) pyrene, benzo(b) fluoranthene, benzo (k) fluoranthene, and indeno (1,2,3-cd) pyrene) were detected at concentrations above the NJDEP Non-Residential Direct Contact Cleanup Criteria concentrations. Cadmium was also

detected in soil samples at a concentration above NJDEP Residential Direct Contact Cleanup Criteria concentration. The disposal area of concern is near former soil sample locations 23SB04, 23SB01 and 23SB02 on the western side of Building D-5. There is an earthen berm, approximately 20 feet high, which surrounds the northern, eastern and western area of the site. The site is accessible via an asphalt road located to the southeast of Building D-5.

2.3 SITE 27

Site 27 is located southwest of Building E-14. An area approximately 30 by 50 feet was used to dispose of oil-contaminated rags, paint chips, and spent sandblasting shot. The shallow soils are comprised of reddish brown gravelly sand with some slag, sand blasting material, and paint chips. The analytical results of three previous soil samples in the area of visual paint chip disposal revealed cadmium concentrations above the NJDEP Residential Direct Contact Cleanup Criteria concentration. The depth of the waste disposal is expected to be one foot below grade.

3.0 IMPLEMENTATION OF ON-SITE ACTIVITIES

3.1 MOBILIZATION

Foster Wheeler Environmental personnel shall include a Site Superintendent who is cross trained as a Health and Safety Officer (HSO).

Soil samples will be collected from each of the sites for waste characterization for disposal as part of the mobilization activities. Specific sampling and analysis information on the waste characterization samples is discussed in Section 4.0.

3.2 SITE PREPARATION

Site preparation activities shall include staking out the areas to be excavated at each site. The areas to be remediated will be based on the location of previous samples collected during the RI activities and visual observations.

Foster Wheeler Environmental will contact the base Public Works Office to verify any type of underground utilities prior to excavating. This effort will be coordinated through the ROICC-NTR.

3.3 SITE 22

This section describes the sequence for the excavation and removal of soils from Site 22. The layout of Site 22 is shown in Exhibit 3-1.

3.3.1 Sampling and Analysis for Disposal

As part of the site mobilization, a composite sample will be obtained from Site 22. The composite sample will be composed of ten soil samples collected at a depth of 0 to 1 foot below grade across the area to be remediated. A decontaminated stainless steel scoop will be used to collect the soil samples. The analytical parameters for waste disposal are provided in Table 4.2.

All analytical results will be provided to the Navy for review and determination of final waste characterization. For the purpose of this Work Plan, based on the analytical results of previous samples, it is assumed the soils will be classified as "non-hazardous contaminated soil" and carry no RCRA waste codes.

3.3.2 Erosion and Sediment Control Measures

Foster Wheeler Environmental shall check for existing signs of erosion within the areas to be excavated in order to determine what type of erosion control measures shall be implemented. If there are indications of surface water run-on from topographically upgradient areas onto the area to be excavated, an earthen diversion berm, using existing soils will first be constructed around the work area to divert any storm water run-on around the work area. In addition, all necessary precautions will be taken to prevent the migration (run-off) of sediment from the excavation area into storm water drainage ditches and nearby waterways through the use of filter fabric fences during the excavation and backfilling operations.

3.3.3 Soil Removal

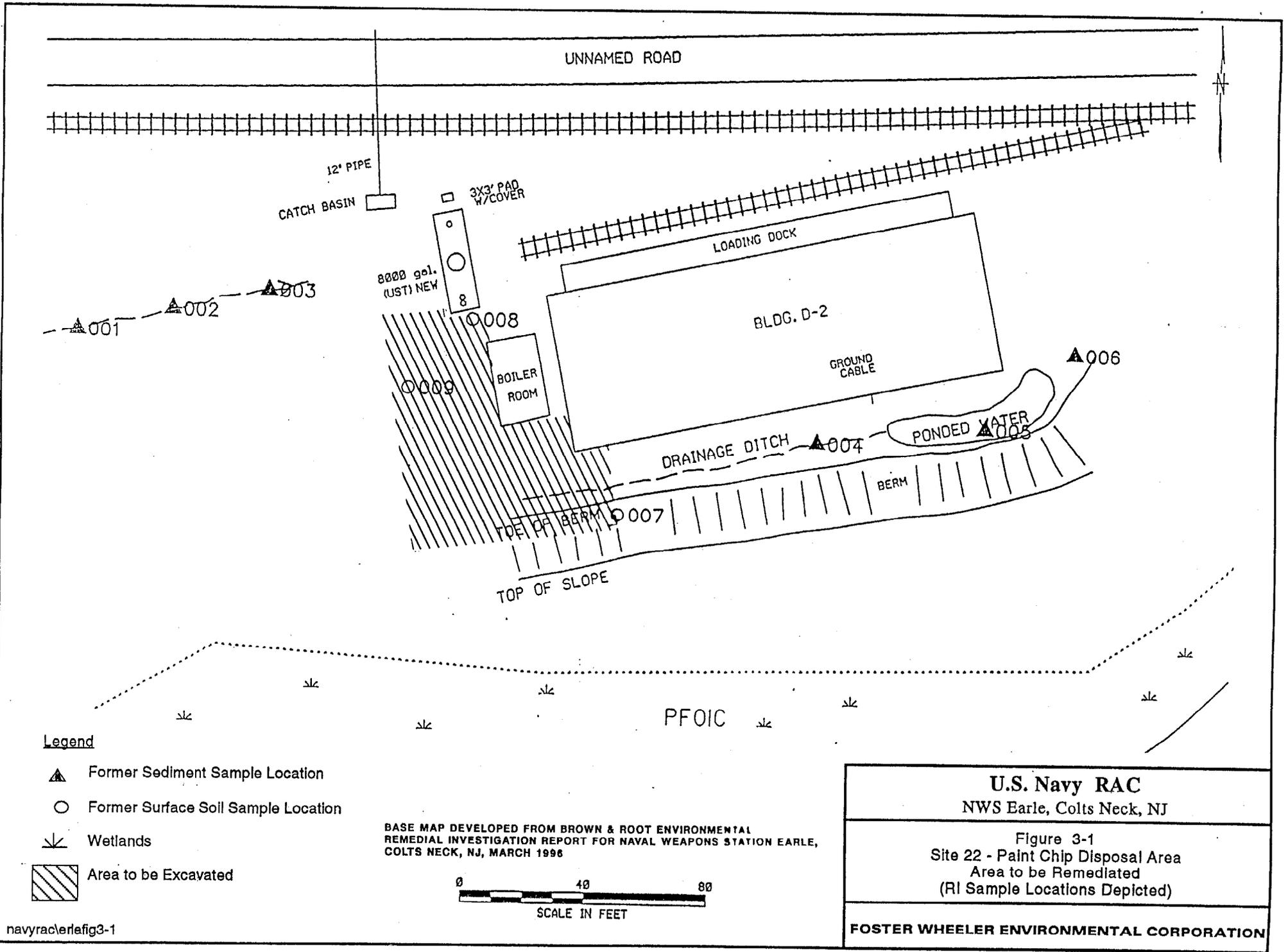
Plastic will be placed on the loading zone in order to prevent the truck tires from coming into contact with any of the soils to be removed, and thus eliminating the need to clean the trucks prior to leaving the loading site. The soil will be excavated with a Case 580 backhoe, or the equivalent. The soils will be direct loaded into dump trucks for removal and off-site disposal. It is estimated that an area of 5,000 square feet will be excavated to a depth of 1 foot below grade, and 185 cubic yards of soil will be transported off-site. The backhoe will be decontaminated prior to mobilizing to the next excavation area. All decontamination materials (ie: plastic) will be containerized in drums.

3.3.4 Post Excavation Sampling

One soil samples will be composited from the bottom corners of the excavation and analyzed for Target Analyte List and Target Compound List parameters. The soil is being excavated on a visual basis since no previous analytical concentrations were above the NJDEP cleanup standards. Specific analysis are included in Section 4.0. The analytical results of confirmatory sampling will be provided to the Navy for evaluation of the removal action.

3.3.5 Site Restoration

The excavated area will be backfilled and reseeded after the Navy reviews the analytical data from the post excavation sample and informs Foster Wheeler Environmental to proceed with the restoration. Clean fill will be used to fill the excavation to 6-inches below grade. The top 6-inches of the excavation will be backfilled with topsoil, and the area will be reseeded. Silt fences will be left in place until the seed takes root and the erosion potential decreases.



Legend

▲ Former Sediment Sample Location

○ Former Surface Soil Sample Location

▾ Wetlands

▨ Area to be Excavated

BASE MAP DEVELOPED FROM BROWN & ROOT ENVIRONMENTAL
REMEDIAL INVESTIGATION REPORT FOR NAVAL WEAPONS STATION EARLE,
COLTS NECK, NJ, MARCH 1996



U.S. Navy RAC
NWS Earle, Colts Neck, NJ

Figure 3-1
Site 22 - Paint Chip Disposal Area
Area to be Remediated
(RI Sample Locations Depicted)

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.4 SITE 23

This section describes the sequence for the excavation and removal of soils from Site 23. The layout of Site 23 is shown in Exhibit 3-2.

3.4.1 Sampling and Analysis for Disposal

As part of the site mobilization, one composite sample will be obtained from Site 23 for waste characterization. The composite sample will consist of 10 soil samples collected from 0 to 3 feet below grade in the area to be excavated. A decontaminated stainless steel auger will be used to collect the soil samples. The analytical parameters for waste disposal are provided in Table 4.2. All analytical results will be provided to the Navy for review and determination of final waste characterization. For the purpose of this Work Plan, based on the analytical results previous samples, it is assumed the soils will be classified as "non-hazardous contaminated soil" and carry no RCRA waste codes.

3.4.2 Erosion and Sediment Control Measures

Foster Wheeler Environmental shall check for existing signs of erosion within the areas to be excavated in order to determine what type of erosion control measures shall be implemented. If there are indications of surface water run-on from topographically upgradient areas onto the area to be excavated, an earthen diversion berm, using existing soils will first be constructed around the work area to divert any storm water run-on around the work area. In addition, all necessary precautions will be taken to prevent the migration (run-off) of sediment from the excavation area into storm water drainage ditches and nearby waterways through the use of filter fabric fences during the excavation and backfilling operations.

3.4.3 Soil Removal

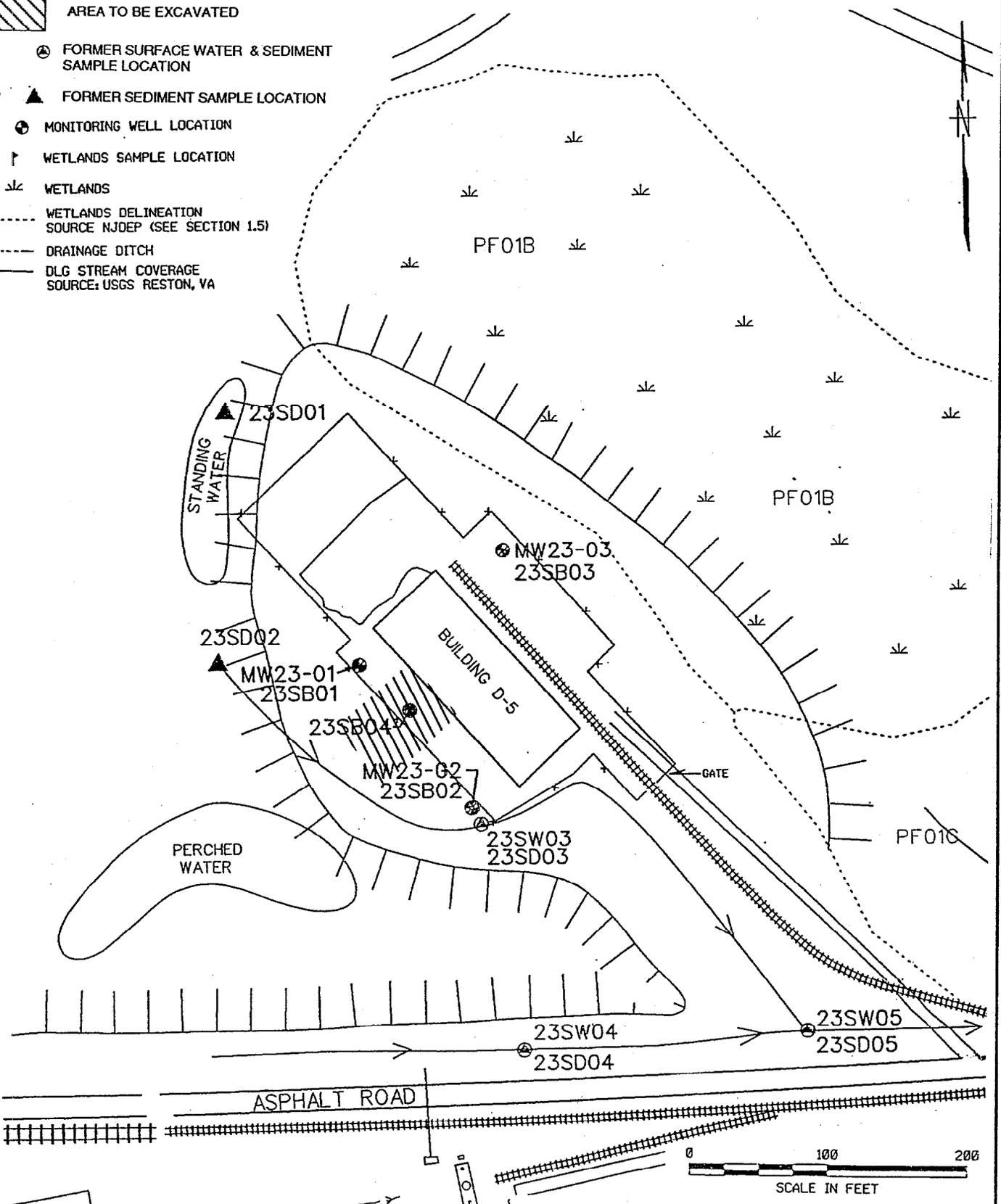
Approximately 75 feet of fence southwest of Building D-5 will be temporarily removed to conduct the soil removal. The fence will be properly reinstalled after the excavation and backfilling operations are completed. Plastic will be placed on the loading zone in order to prevent the truck tires from coming into contact with any of the soils to be removed, and thus eliminating the need to decontaminate the trucks prior to leaving the loading site. The soil will be excavated with a Case 580 backhoe, or equivalent. The soils will be direct loaded into dump trucks for removal and off-site disposal. It is estimated that a 75 ft. by 50 ft. area will be excavated to a depth of 3 feet below grade, and 417 cubic yards of soil will be transported off-site. The backhoe will be decontaminated prior to mobilizing to the next excavation area. All decontamination materials (ie: plastic) will be containerized in drums.

3.4.4 Post Excavation Sampling

Soil samples (4) will be collected at the bottom corners of the excavation and analyzed for polyaromatic hydrocarbons and cadmium since these were the only compounds and analyte of concern at this site. Specific analysis are included in Section 4.0. The analytical results of confirmatory sampling will be provided to the Navy for evaluation of the removal action.

LEGEND

-  AREA TO BE EXCAVATED
-  FORMER SURFACE WATER & SEDIMENT SAMPLE LOCATION
-  FORMER SEDIMENT SAMPLE LOCATION
-  MONITORING WELL LOCATION
-  WETLANDS SAMPLE LOCATION
-  WETLANDS
-  WETLANDS DELINEATION SOURCE NJDEP (SEE SECTION 1.5)
-  DRAINAGE DITCH
-  DLG STREAM COVERAGE SOURCE: USGS RESTON, VA



BASE MAP DEVELOPED FROM BROWN & ROOT ENVIRONMENTAL REMEDIAL INVESTIGATION REPORT FOR NAVAL WEAPONS STATION EARLE, COLTS NECK, NJ, MARCH 1996

navyacrlefig3-2

<p>U.S. Navy RAC NWS Earle, Colts Neck, NJ</p>
<p>Figure 3-2 Site 23 - Paint Disposal Area Area to be Remediated (RI Sample Locations Depicted)</p>
<p>FOSTER WHEELER ENVIRONMENTAL CORPORATION</p>

3.4.5 Site Restoration

The excavated area will be backfilled and reseeded after the Navy reviews the analytical data from the post excavation sample and informs Foster Wheeler Environmental to proceed with the restoration. Clean fill will be used to fill the excavation to 6-inches below grade. The top 6-inches of the excavation will be backfilled with topsoil, and the area will be reseeded. Silt fences will be left in place until the seed takes root and the erosion potential decreases.

3.5 SITE 27

This section describes the sequence for the excavation and removal of soils from Site 27. The layout of Site 27 is shown in Exhibit 3-3.

3.5.1 Sampling and Analysis for Disposal

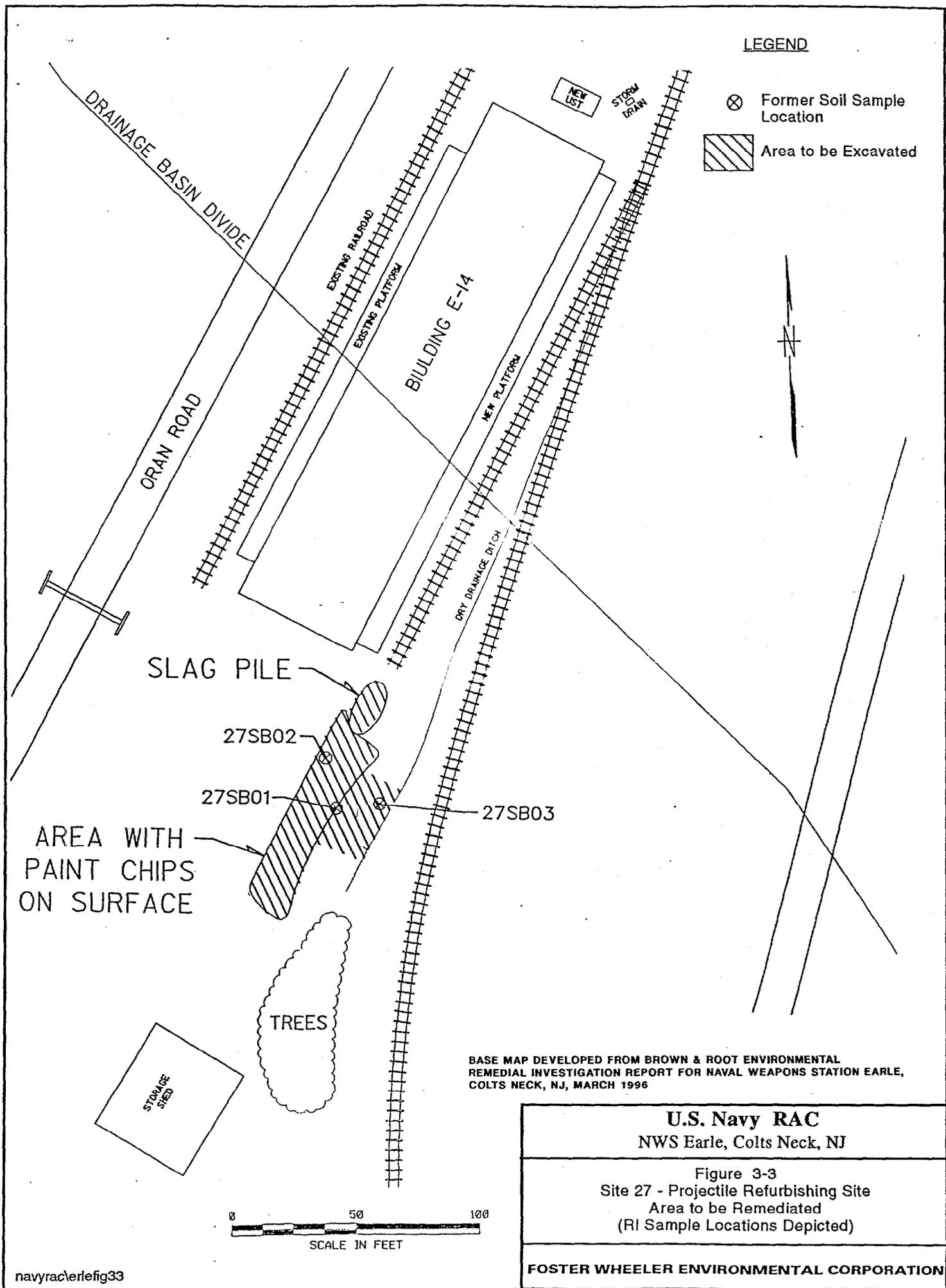
As part of the site mobilization, one composite sample will be obtained from Site 27 for waste characterization. The composite sample will consist of ten soil samples collected at a depth of 0 to 1 foot below grade across the area to be excavated. A decontaminated stainless steel scoop will be used to collect the soil sample. The analytical parameters for waste disposal are provided in Table 4.2. All analytical results will be provided to the Navy for review and determination of final waste characterization. For the purpose of this Work Plan, based on the analytical results of previous samples, it is assumed the soils will be classified as "non-hazardous contaminated soil" and carry no RCRA waste codes.

3.5.2 Erosion and Sediment Control Measures

Foster Wheeler Environmental shall check for existing signs of erosion within the areas to be excavated in order to determine what type of erosion control measures shall be implemented. If there are indications of surface water run-on from topographically upgradient areas onto the area to be excavated, an earthen diversion berm, using existing soils will first be constructed around the work area to divert any storm water run-on around the work area. In addition, all necessary precautions will be taken to prevent the migration (run-off) of sediment from the excavation area into storm water drainage ditches and nearby waterways through the use of filter fabric fences during the excavation and backfilling operations.

3.5.3 Soil Removal

Plastic will be placed on the loading zone in order to prevent the truck tires from coming into contact with any of the soils to be removed, and thus eliminating the need to clean the trucks prior to leaving the loading site. The soil will be excavated with a Case 580 backhoe, or equivalent. The soils will be direct loaded into dump trucks for removal and off-site disposal. It is estimated that a 30 ft. by 50 ft. area will be excavated to a depth of 1 foot below grade, and 56 cubic yards of soil will be transported off site. The backhoe will be decontaminated prior to mobilizing to the next excavation area. All decontamination materials (ie: plastic) will be containerized in drums.



LEGEND

⊗ Former Soil Sample Location

▨ Area to be Excavated

BASE MAP DEVELOPED FROM BROWN & ROOT ENVIRONMENTAL
 REMEDIAL INVESTIGATION REPORT FOR NAVAL WEAPONS STATION EARLE,
 COLTS NECK, NJ, MARCH 1996

U.S. Navy RAC
 NWS Earle, Colts Neck, NJ

Figure 3-3
 Site 27 - Projectile Refurbishing Site
 Area to be Remediated
 (RI Sample Locations Depicted)

FOSTER WHEELER ENVIRONMENTAL CORPORATION

3.5.4 Post Excavation Sampling

Soil samples (4) will be collected at the bottom corners of the excavation and analyzed for cadmium since this was the only analyte of concern at this site. Specific analysis are included in Section 4.0. The analytical results of confirmatory sampling will be provided to the Navy for evaluation of the removal action.

3.5.5 Site Restoration

The excavated area will be backfilled and reseeded after the Navy reviews the analytical data from the post excavation sample and informs Foster Wheeler Environmental to proceed with the restoration. Clean fill will be used to fill the excavation to 6-inches below grade. The top 6-inches of the excavation will be backfilled with topsoil, and the area will be reseeded. Silt fences will be left in place until the seed takes root and the erosion potential decreases.

4.0 FIELD SAMPLING AND ANALYSIS PLAN

4.1 INTRODUCTION

This section describes the program which ensures the chemical data meets the requirements for completeness, precision, accuracy, representativeness, comparability, dependability and legal defensibility presented in the interim guidance document, Navy Installation Restoration Laboratory Quality Assurance Guide, Naval Facilities Engineering Service Center, February 1996.

4.2 SAMPLING PROCEDURES

4.2.1 Sample Tracking System

Each sample shall be designated by an alpha-numeric code which shall identify the site, matrix sampled, and contain a sequential sample number. The site code shall be the site number, in this case either 22 for Site 22, 23 for Site 23, or 27 for Site 27. Location types shall be identified by a two-letter code, while each matrix sampling location shall be identified by a two-digit number.

FIRST SEGMENT		SECOND SEGMENT	
NN	-	AA	NN
Site	-	Location Type	Specific Location

Symbol Definition:

A= Alphabetic
N= Numeric

Location Type:

WC = Waste Characterization
SS = Soil Sample

FB = Field Blank
TB = Trip Blank

For example, a waste characterization sample taken from Site 23 would be labeled 23-WC01.

4.2.2 Sampling Objectives

Data generated by implementation of the field sampling and analysis plan is expected to be used for the following purposes:

- To characterize soils for off-site disposal; and
- To confirm the all contaminated soils have been excavated.

Table 4-1 presents the sample rationale and analytical testing requirements. Table 4-2 provides the analytical methodology and bottleware. A description of the sample material and locations shall be submitted to the Navy with the analytical results. Air sampling and other health and safety related sampling is discussed in the HASP.

4.3 STANDARD OPERATING PROCEDURES

Standard operating procedures (SOPs) for solids (soils) sampling and sampling requirements are provided in Attachment 1. The soil samples will be collected with decontaminated stainless steel augers and scoops. Composite samples will be transferred to a stainless steel bowl and homogenized with a stainless steel spoon as described in Attachment 1.

4.4 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC)

4.4.1 Sample Shipping and Packaging

Chain-of-Custody forms, sample labels, custody seals, and other sample documents shall be completed as specified in the above-referenced manual. All entries shall be made in permanent ink. If errors are made when completing any of these forms, the error shall be crossed out with a single line, initialed, and dated by the sampler.

Each sample shall be labeled with the following information:

1. Site name
2. Field Identification or sample station number
3. Date and time of sample collection
4. Designation as a grab or composite sample
5. Sample type (matrix)
6. The signature of the sampler
7. Sample preservation and preservative used
8. The general types of analyses to be conducted.

**TABLE 4-1: SAMPLE DESCRIPTION/RATIONALE
NAVY EARLE SITES 22, 23 AND 27**

SAMPLE ID.	DESCRIPTION/RATIONAL	ANALYSIS
CHARACTERIZATION SAMPLES		
22-WC01	Composite sample from a depth of 0 to 1 foot at the paint chip disposal area at Site 22 in order to characterize the waste for proper disposal and to satisfy disposal facility requirements.	Full TCLP, RCRA Characteristics, and PCB analysis
23-WC01	Composite sample from a depth of 0 to 3 feet at Site 23 in the area around former boring 23SB04 in order to characterize the waste for proper disposal and to satisfy disposal facility requirements.	Full TCLP, RCRA Characteristics, and PCB analysis
27-WC01	Composite sample from a depth of 0 to 1 foot at Site 27 in order to characterize the waste for proper disposal and to satisfy disposal facility requirements.	Full TCLP, RCRA Characteristics, and PCB analysis
CONFIRMATORY SAMPLES		
22-SS01	One composite soil sample obtained in the bottom corners of the excavation at Site 22 in order to ensure that the area has been remediated to acceptable concentrations.	TAL Inorganics and TCL Extractable Organics
23-SS01 through 23-SS04	Four soil samples obtained in the bottom corners of the excavation at Site 23 in order to ensure that the area has been remediated to acceptable concentrations.	PAHs and Cadmium
27-SS01 through 27-SS04	Four soil samples obtained in the bottom corners of the excavation at Site 27 in order to ensure that the area has been remediated to acceptable concentrations.	Cadmium
QA/QC SAMPLES		
22-SS02	Duplicate sample of 22-SS04 for quality assurance/quality control.	TAL Inorganics and TCL Organics
23-FB01	Assess the decontamination of the sampling equipment during confirmatory sampling.	TAL Inorganics and TCL Organics
27-SS01 MS/MSD	Matrix spike/matrix spike duplicate for soil analysis.	TAL Inorganics and TCL Organics

**TABLE 4-2: ANALYTICAL PARAMETERS
NAVY EARLE SITES 22, 23 AND 27**

SAMPLE MATRIX	NUMBER OF SAMPLES	SAMPLE LOCATION	SAMPLE CONTAINER	LABORATORY ANALYSIS & METHOD	PRESERVATION	HOLDING TIMES
Waste Characterization (Waste/Soil)	4	22-WC01, 23-WC01, 23-WC02, 27-WC01	Two (2) 32 oz. glass jars and two (2) 2 oz. glass jars for all parameters	TCLP Metals SW6010/7470	Cool to 4°C	7 days
				TCLP Volatiles SW8240	Cool to 4°C	7 days
				TCLP Semi-Volatiles Sw 8270	Cool to 4°C	7 days
				TCLP Pesticides SW 8080	Cool to 4°C	7 days
				TCLP Herbicides SW 8150	Cool to 4°C	7 days
				pH (Corrosivity) SW 9045C	Cool to 4°C	7 days
				Ignitability SW 1010	Cool to 4°C	7 days
Reactive Cyanide SW 846, Chapter 7.3	Cool to 4°C	7 days				

**TABLE 4-2: ANALYTICAL PARAMETERS
NAVY EARLE SITES 22, 23 AND 27
(CONTINUED)**

SAMPLE MATRIX	NUMBER OF SAMPLES	SAMPLE LOCATION	SAMPLE CONTAINER	LABORATORY ANALYSIS & METHOD	PRESERVATION	HOLDING TIMES
Waste Characterization (Waste/Soil)	4	22-WC01, 23-WC01, 23-WC02, 27-WC01	Two (2) 32 oz. glass jars and two (2) 2 oz. glass jars for all parameters	Reactive Sulfide SW 846, Chapter 7.3	Cool to 4°C	7 days
				PCB (total) SW 8080	Cool to 4°C	7 days
				Total Solids ASTM	N/A	
				Paint Filter Test SW 9095	N/A	
Soil Samples	6	22-SS01, 22-SS02 and 23-SS01 through 23-SS04	One (1) 8 oz. glass jar	PAHs SW 846 Method 8100	Cool to 4°C	10 days
	10	22-SS01, 22-SS02, 23-SS01 through 23-SS04, and 27-SS01 through 27-SS04	One (1) 8 oz. glass jar	Cadmium SW 846 Method 7130	Cool to 4°C	10 days to extraction; 40 days to analysis

**TABLE 4-2: ANALYTICAL PARAMETERS
NAVY EARLE SITES 22, 23 AND 27
(CONTINUED)**

SAMPLE MATRIX	NUMBER OF SAMPLES	SAMPLE LOCATION	SAMPLE CONTAINER	LABORATORY ANALYSIS & METHOD	PRESERVATION	HOLDING TIMES
Field Blank (Aqueous)	1	23-FB01	One (1) 8 oz. glass jar	TCL Extractable Organics	Cool to 4°C	10 days to extraction; 40 days to analysis
			One (1) 8 oz. glass jar	TAL Metals SW 6010/7471	HNO3 Cool to 4°C	6 months

Each environmental sample shall be properly identified and sealed in a polyethylene (PE) bag. The bag shall then be placed in a fiberboard cooler which has also been lined with a large PE bag. The samples shall be packed with sufficient ice (sealed in PE bags) to cool the samples to 4° C. Enough non-combustible adsorbent cushioning material shall be filled to minimize the possibility of container breakage. The large PE bag in the cooler shall be sealed and the container closed. Custody seals and nylon strapping tape shall be affixed to the cooler. All samples shall be shipped within 24 hours of collection via a common carrier. All sample coolers and samples shall be shipped in accordance to Pennsylvania DOT requirements and regulations.

A Chain-of-Custody (COC) record shall be used to record the custody of the samples, and shall accompany the samples at all times. The following information shall be contained on the COC record:

1. Project name
2. Signature of samplers
3. Sampling station number, date and time of collection, grab or composite designation.
4. Signatures of individuals involved in the sample transfer (i.e., relinquishing and accepting the samples).
5. Sample matrix
6. Types of analysis to be conducted
7. Sample preservation and preservatives used.

4.4.2 Laboratory Data Reporting

As a minimum, laboratory reports presenting data shall contain the following:

- Title of the project;
- Date report was prepared;
- Name, address and telephone number of the contractor;
- Sample identification numbers;
- Type of sample;
- Date on which analysis was performed;
- Any special observations, circumstances or comments which may be relevant for interpretation of the data; and,
- The signature of the laboratory manager.

Each parameter tested shall include: name of parameter, USEPA or other approved testing procedure references, detection limits, results of analysis, and the unit of the reported results.

4.4.3 Records

4.4.3.1 Field Sampling and Monitoring Records

Records of field activities, which shall support the integrity of the samples and field monitoring, shall be entered in a bound logbook with numbered pages. The records shall be dated and signed or otherwise authenticated on the day of entry. The logbook shall document vital information, such as

sample source, sampling methods, sample conditions, and field measurements. Any problems encountered and the corrective actions taken in the field shall be documented in the logbook.

The Site Superintendent/Health and Safety person shall keep a site logbook which summarizes the daily sampling and monitoring activities. The logbook shall address any specific problems that arose during the day, final resolutions, and their impact on the outcome of the field investigation.

4.4.3.2 Laboratory Records

In addition to the data set deliverables, the laboratory shall maintain records, that shall contain, at a minimum, the following information:

- Copies of relevant analyst notebook pages;
- Copies of relevant instrument logs;
- Raw instrument outputs (chromatograms, ion spectra, absorbance value, etc.);
- QC Charts;
- Documentation of Corrective Actions;
- Chain-of-Custody information;
- Automated data processing system output and/or calculations;
- Calibration data; and
- Blank, spike and spike duplicate results.

5.0 PROJECT MANAGEMENT

The project management team shall be responsible for all technical and administrative aspects of the remediation project.

5.1 PROJECT SCHEDULE

Exhibit 5-1 represents the project schedule.

5.2 PROJECT STAFFING PLAN

The organization chart for this project is provided in Exhibit 5-2. The field staff shall consist of a Project Superintendent (PS), the SHSO and craft.

5.2.1 Project Superintendent

Mr. Michael Heffron is the Project Superintendent (PS) for the project. The PS will coordinate all daily site operations, enforce HASP implementation, complete on-site QC responsibilities and will communicate with the Quality Control Manager.

5.2.2 Site Health and Safety Officer (SHSO)

Mr. Heffron will also function as the SHSO for the project. The SHSO is responsible for the enforcement of the HASP, air monitoring, sampling, training, and coordination of medical

surveillance for all site personnel. The SHSO has a communication line to the program Health and Safety Manager. The SHSO also has "stop work" authority if unsafe conditions arise.

5.3 SUBMITTALS

The Submittal Register is provided in Attachment 2

5.3.1 Reviewing, Certifying, Approving Authority

The QC organization shall be responsible for reviewing and certifying that submittals are in compliance with the contract requirements. The approving authority shall be Mr. Akram Aziz, Quality Control Manager (QCM). The PS shall provide on-site QC support and will interact with the QCM. All submittals shall be accompanied by a transmittal form which shall identify the submittal package and provide a unique tracking number.

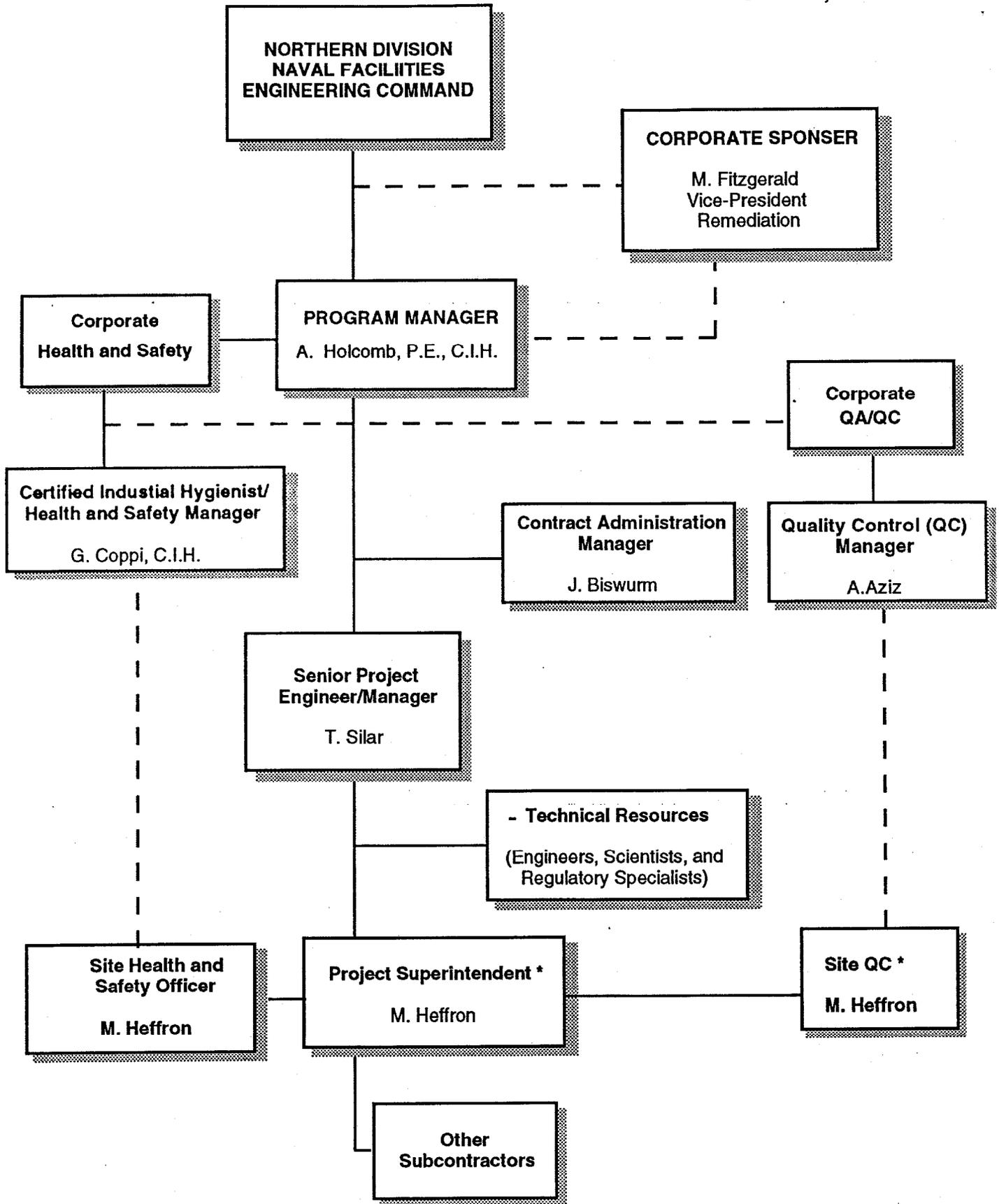
5.4 MEETINGS

5.4.1 Pre-Construction Meetings

Prior to the mobilization at the site, the Project Superintendent shall conduct a pre-construction meeting in the ROICC office. The date and times for the pre-construction meeting shall be approved by the ROICC NTR.

5.4.2 Daily Safety Meeting

Prior to starting work, a daily safety meeting will be conducted by the Foster Wheeler Environmental Site Health and Safety Officer. All of the day's planned activities will be reviewed with particular attention focused on PPE and risk. All personnel are required to attend the meeting.



* Field Staff

6.0 REGULATORY COMPLIANCE

6.1 REGULATORY REPORTING COMPLIANCE

No reports to regulatory agencies shall be submitted by Foster Wheeler Environmental relating to the remediation activities at Sites 22, 23, and 27.

6.2 WASTE MANAGEMENT

Waste materials that are determined to be non-hazardous shall be managed in compliance with New Jersey's solid waste regulations.

Removal operations for soil and debris shall be conducted under the worker protection provisions of regulations promulgated by the Occupational Safety and Health Administration (OSHA) in 29 CFR Parts 1910 and 1926.

If hazardous waste is removed during this project, it shall be managed in accordance with the storage and disposal provisions of Federal and state regulations. Therefore, following identification and classification of the waste materials, an assessment shall be made of the applicability of other Federal and state hazardous waste regulations. New Jersey regulations applicable to the conduct of this project are contained in NJAC 7: 26-28, Criteria, Identification and Listing of Hazardous Wastes, NJAC 7:26-7.1 thru 7.4, Generators of Hazardous Waste, and NJAC 7:26-7.5, Transportation of Hazardous Waste. Applicable federal regulations are contained in 40 CFR Parts 260-268.

6.2.1 Waste Disposal

Each waste stream generated during this project shall be evaluated to ensure that it meets the waste acceptance criteria and packaging requirements for the proposed treatment, storage, and disposal (TSD) facilities prior to transport.

If subcontracted by Foster Wheeler Environmental, the disposal facility must be approved under Foster Wheeler Environmental Subcontracting Procedures which require that the disposal facility:

- Is in physical compliance with RCRA or other applicable federal and state laws;
- Is not releasing any hazardous wastes, hazardous constituents or hazardous substances;
- Meets minimum technology requirements; and
- All releases, including environmentally significant releases at non-receiving units, at the facility must be addressed by a corrective action program.

The facility must demonstrate a properly designed system, and must presently operate (and historically have operated) in a manner that controls the types of materials accepted for disposal. Invoices shall be returned by the landfill operators verifying that the waste was received and properly disposed. Foster Wheeler Environmental shall provide a copy of the facility compliance check documentation to the Navy with the Waste Profile.

Foster Wheeler Environmental shall be responsible for preparation of the waste disposal manifests. The manifests shall be reviewed and signed by the Navy as generator of the waste. All waste generated from on-site remediation activities at the Naval Weapons Station Earle shall be

manifested through Mr. Greg Goepfert or Mr. Gus Hermanni. Manifests shall be carried by the transporters and must include the following:

- The generator's name, mailing address, site address if different from the mailing address, and phone number;
- The generator's EPA I.D. number;
- The hauler (or haulers) name, phone number;
- The hauler (or haulers) EPA I.D. number;
- The treatment, storage or disposal facility's name, address, and telephone number (designated facility);
- The treatment, storage, or disposal facility's EPA I.D. number;
- The name, type, and quantity of hazardous waste being shipped, proper DOT shipping name, hazard class, and I.D. number;
- Special handling instructions and any other information required on the form to be supplied by the generator;
- When shipping hazardous waste to a waste reuse facility, the generator must enter the waste reuse facility I.D. number in section G; and,
- The proper codes that accurately describe the shipment of hazardous waste.

Before allowing the manifested waste to leave the property, the appropriate Navy Public Works representative must:

- Sign the manifest certification by hand;
- Obtain the handwritten signature of the initial hauler and date of acceptance on the manifest;
- Retain one copy; and
- Give the remaining copies of the manifest form to the hauler.

6.3 AIR POLLUTION CONTROL

Fugitive dust emissions may result from project operations. Consequently, engineering controls shall be used to control dust emissions. This shall include keeping surfaces adequately wet during removal activities and covering materials being transported to prevent fugitive dust emissions.

6.4 WASTEWATER AND STORMWATER MANAGEMENT

Foster Wheeler Environmental shall check for existing signs of erosion within the areas to be excavated in order to determine what type of erosion control measures shall be implemented. If there are indications of site surface run-on from topographically upgradient areas onto the area to be excavated, an earthen diversion berm, using existing soils will first be constructed around the work area to divert any storm water run-on around the work area. In addition, all necessary precautions will be taken to prevent the migration of sediment (run-off) into storm water drainage ditches and nearby waterways through the use of filter fabric fences during the excavation and backfilling operations.

The only wastewater generated will be decon water from steam cleaning the backhoe. All decon water will be containerized in drums and disposed of accordingly.

6.5 TRANSPORT

To ensure safe transport of the waste, only transporters who have demonstrated competence and the required license and permits for transporting waste shall be used. Foster Wheeler Environmental policies and procedures for subcontracting shall be followed. Transporter EPA/State identification numbers shall be kept in project and compliance files. Trucks shall be covered to prevent fugitive releases of material during transport.

6.6 DOT REQUIREMENTS

Hazardous material must be properly classed, described, packaged, marked, labeled and in condition for shipment as required by 49 CFR 171.

Waste that does not exhibit one of the nine DOT hazard class characteristics (i.e., explosive, flammable, poison, combustible, etc.) is not regulated under DOT rules for the transportation of hazardous material. If waste is suspected to be hazardous, then it must be shipped under the suspected hazard class. If a particular hazard class is unable to be determined, then the soil or water may be shipped under either of the following:

Shipping Name	Hazard Class	ID Number	Packing Group	Label
Environmentally hazardous substances, liquid, n.o.s.	9	UN3082	III	CLASS 9
Environmentally hazardous substances, solid, n.o.s.	9	UN3077	III	CLASS 9

When using either one of these "n.o.s." (not otherwise specified) shipping names, at least two technical names must follow (i.e., "Environmentally hazardous substances, liquid, n.o.s. [Benzene and Acetone]").

The shipping name, identification number, packing group, instructions, cautions, weights, EPA waste code numbers and consignee/consignor designations must be marked on packages for shipment. Labeling provides information regarding the DOT hazard class. The label to be placed on material will depend upon the results of sampling. Once the waste is characterized, reference should be made to the Hazardous Materials Table in 49 CFR 172.101 to determine the appropriate label. The package (or drum) must be marked and labeled as specified in 49 CFR 172.301.

The person offering hazardous material for shipment must offer placards (49 CFR 172.506). Any quantity of material listed in Table 1 of the regulations must be placarded. However, if there is less than 1,000 lb. of a Table 2 material, no placard is required. No Class 9 placard is required for domestic shipments. If a placard is required, the label referenced above must be affixed on each side and each end of the vehicle(s).

Hazardous material shipping papers must have the following description of the hazardous material, in the following order:

- Proper shipping name;
- Hazard class or division;
- Identification number;
- Packaging group;
- Total quantity (must appear either before or after the above information); and,
- Technical and chemical group names may be entered in parentheses between the proper shipping name and hazard class or following the basic description (e.g., "Flammable liquids, n.o.s. [contains xylene and benzene], 3 UN1993, PG II").

Other required information includes:

- EPA identification (manifests);
- Emergency Response Guidebook numbers;
- Twenty-four (24) hour emergency response number, supplied by the generator and answered by a knowledgeable person;
- Signatures; and
- Shipper's certification.

ATTACHMENT 1

STANDARD OPERATING PROCEDURE
for
SURFACE SOIL SAMPLING

Surface soil samples will be obtained using a dedicated, disposable, stainless steel scoop, spoon or trowel to avoid cross-contamination and minimize decontamination of sampling equipment. The following procedures apply to the collection of surface soils from a depth of 0-6 inches using a stainless steel scoop, spoon or trowel:

1. Wear protective gear as specified in the Health and Safety Plan. Samplers will don new sampling gloves prior to sampling at each new location.
2. Use a dedicated stainless steel scoop/spoon/trowel to scrape away surficial organic material (grass, leaves, etc.).
3. Obtain soil sample using the scoop/spoon/trowel by scooping soil from the surface to 3 inches below the surface.
4. Empty contents of the scoop/spoon/trowel into a dedicated stainless steel pan.
5. Fill volatile sample bottles immediately so as not to compromise sample integrity.
6. Homogenize soil in the pan using a dedicated utensil and transfer samples into the appropriate containers. Homogenization will be completed as per the following procedure:

After collection of the volatile sample(s), the soil in the pan will be scraped from the sides, corners and bottom of the pan, rolled to the middle of the pan, and initially mixed. The soil will be quartered and moved to the four corners of the pan. Each corner will then be mixed individually, and when completed be rolled to the center of the pan and mixed once again.

7. Fill appropriate sample containers with homogenized materials randomly selected.
8. Place analytical samples in cooler and chill with ice. Samples will be shipped within 24 hours to the designated laboratory.
9. Fill out field logbook, custody seals, labels, and Chain-of-Custody forms.

ATTACHMENT 2

SUBMITTAL REGISTER

Contract Number: N62472-94-D-0398 D.O. # 0017 Mod. #3

Project Title: Remediation of Sites 22, 23, and 27

LOCATION: Colts Neck, NJ

CONTRACTOR: Foster Wheeler Environmental Corporation

SPEC SECTION NO.	SD NO. & TYPE OF SUBMITTAL-MATL OR PRODUCT	SPEC PARA NO.	CLASSIF/ APPR BY CO *	GOVT OR A/E REVR	TRANS CONTL NO.	PLANNED SUBMITTAL DATE	CONTRACTOR ACTION			APPROVING AUTHORITY ACTION				CONTR	
							ACT. CODE	DATE OF ACTION	DATE FWD TO APPR AUTH / DATE RECD FROM CONTR	DATE FWD TO OTHER REVIEWER	DATE RECD FROM OTHER REVIEWER	ACT. CODE	DATE OF ACTION	MAILED TO CONTR / RECD FROM APPR AUTH	REMARKS
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)	(o)	(p)
	SD-18, Records														
	Health & Safety Plan	N/A	"G"			8/8/96									
	SD-18, Records														
	Work Plan	N/A	"G"			8/20/96									
	SD-18, Records														
	Quality Control Plan	N/A	"G"			5/29/96									
	SD-18, records														
	Waste Profiles	N/A	"G"			8/23/96									
	SD-18, Records														
	Disposal Approvals	N/A				8/30/96									
	SD-10, Test Reports														
	Sampling Results	N/A				8/30/96									
	SD-18, Records														
	Closeout/Final Report	N/A	"G"			11/7/96									

* Navy Notes:
Approved by:
G: Contracting Officer
Blank: CQC Manager

* NASA Notes:
Approved by:
Blank: Contracting Officer

* Army Notes:
Classification:
GA: Gov't Approval
FIO: For Infor ONLY

ACTION CODES: NR: Not Reviewed AN: Approved as Noted A: Approved
RR: Disapproved; Revise and Resubmit (Others may be prescribed by the Transmittal Form)